

REMARKS/ARGUMENTS

This Amendment is in response to the Office Action mailed February 8, 2006 in the above-identified application. Based on the foregoing amendments and the following comments, careful reconsideration and allowance of the application are respectfully requested.

By this amendment, Applicants have amended claims 1, 2, 4, 19, and 20 to more particularly point out Applicants' invention. Applicants have cancelled, without prejudice, claims 3, 17, and 18. Applicants have also added new dependent claims 21-23. Hence, claims 1, 2, 4-16, and 19-23 are currently pending. Applicants believe no additional claim fees are necessary. However, please charge any fees to deposit account No. 50-0896 in case the need for such fees has been inadvertently overlooked.

The Examiner rejected claims 1-11, 13, 14, 19, and 20 under 35 U.S.C. §103 as being unpatentable over Reichelderfer et al. (US 5,016,332) in view of Lubomirsky et al. (US Pub. No. 2002/0121312 A1). Claims 12 and 17 are also rejected under 35 U.S.C. §103 as being unpatentable over Reichelderfer in view of Lubomirsky and further in view of Collins et al. (US 6,454,898). Claim 15 is also rejected under 35 U.S.C. §103 as being unpatentable over Reichelderfer in view of Lubomirsky and further in view of Krueger (US 5,131,460). Claims 16 and 18 are also rejected under 35 U.S.C. §103 as being unpatentable over Reichelderfer in view of Lubomirsky and further in view of Wicker et al. (US 4,724,510). These rejections are respectfully traversed.

Turning to claim 1, Applicants amended claim 1 now also requires "each of the plurality of lift pins are also configured to provide a path for supplying a bias voltage from a bias source to the workpiece on the wafer platen." No new matter has been entered and support for the amendment to claim 1 can be found throughout the specification including at least page 6, lines 18-27 and Fig. 4.

Reichelderfer teaches a heated platen 24 and a plurality of lift pins 43 passing through sleeved openings 44 in the heated platen 24. The lift pins 43 are coupled to a carrier 47 and the carrier 47 is mounted to a shaft or rod 48 so that the carrier 47 is adapted to be raised or lowered relative to the platen 24. Column 2, lines 30-35. The lift pins 43 provide only a lifting function. Therefore, Reichelderfer does not disclose, teach, or suggest that "each of the plurality of lift pins are also configured to provide a path for supplying a bias voltage from a bias source to the workpiece on the wafer platen" as required by claim 1. (Emphasis added.)

Lubomirsky does not provide the missing teachings of Reichelderfer. Lubomirsky is directed at heating and cooling a wafer such as in an anneal chamber 102. Lubomirsky teaches the wafer 106 is first heated by the pedestal heating plate 108 by resting the wafer 106 on the top surface of the pedestal heating plate. In order to cool the wafer 106, Lubomirsky teaches "the lift mechanism 104 lifts the wafer 106 from the pedestal heating plate 108 and moves the wafer 106 to an upper position adjacent to the cooling plate 154." Page 2, Paragraph [0025], lines 2-4. The lift pins 110 provide only a lifting function to position the wafer in cooling, heating, and removal positions.

Collins does not also provide the missing teachings of Reichelderfer. The Examiner argued (with reference to original claim 17) that Collins "discloses a bias source (Fig. 26, 1420) for supplying a bias voltage to the lift pins (Fig. 27, 4010)." Page 9, lines 1-2 of the Official Action mailed February 8, 2006. Applicants respectfully disagree. Collins teaches a voltage source 1420 to provide an electrostatic clamping voltage to the cold plate 1100 for electrostatic clamping. There is no bias voltage applied to the lift pins 4010. In fact, the lift pins 4010 are grounded via the lift spider 4020 as illustrated in Fig. 27 of Collins. For example, with reference to the source 1420 of Fig. 26, Collins teaches:

"FIG. 26 illustrates how the embodiment of FIG. 22 may be modified to include the feature of electrostatic clamping of the ring 62 to the cold plate 1100. In FIG. 26, a dielectric layer 1410 is inserted between the polymer-hardening precursor ring 62 and the cold plate 1100, and an electrostatic clamping voltage is applied to the cold plate 1100 from a D.C. voltage source 1420 through a clamping switch 1430." Column 24, lines 48-54. (Emphasis added.)

In addition, with reference to the lift pins 4010 of Fig. 27, Collins teaches:

"The present invention overcomes the foregoing problems with conventional electrostatic chucks by providing grounded semiconductor pins or lift pins within the chuck that are raised to contact the backside of the wafer whenever it is desired to remove or de-chuck the wafer." Column 32, lines 3-8. (Emphasis added.)

Accordingly, Applicants respectfully submit amended claim 1 is allowable. Claims 2, 4-16, and new claims 21-23 depend from claim 1 and are patentable over the cited references for at least the same reasons. Support for new claims 21-23 can be found throughout the specification including at least page 8, lines 6-8, lines 9-11, and lines 18-21. The further documents relied

upon in some of these rejections such as Krueger and Wicker fail to cure the deficiencies as discussed above in relation to their base claim 1.

Amended claim 19 requires “engaging lift pins through channels of the wafer platen each extending from a top surface to a bottom surface of the wafer platen for positioning the workpiece in a clamping position; engaging the lift pins through the channels of the wafer platen to lift the workpiece above the surface of the wafer platen for positioning the workpiece in a lift off position; and supplying a bias voltage from a bias source to the workpiece through the lift pins” and is patentable over the cited references for at least the same reasons as claim 1. (Emphasis added).

Amended claim 20 depends from claim 19 and is patentable over the cited references for at least the same reasons.

Accordingly, Applicants respectfully submit that in light of the foregoing claim amendments and remarks, all of the presently pending claims are now in condition for allowance. Reexamination and reconsideration are respectfully requested. Early allowance is earnestly solicited. In the event the Examiner deems personal contact desirable in disposition of this application, the Examiner is respectfully requested to call the undersigned attorney. Please charge any additional fees or credit any overpayments to deposit account No. 50-0896.

Respectfully submitted,
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Amendments to the Drawings

Attached hereto in **Appendix A** are “replacement sheets” 1 and 4. The designation of “replacement sheet” indicates changes were made to the sheets as compared to the set of drawings filed with the application on April 1, 2004. Table 1 below indicates for each respective sheet number, the Figs. on each sheet and the changes made to an associated Fig. for each respective sheet.

Applicants have made these amendments to the Figs. in an earnest effort to address each of the Examiner’s objections to the drawings. In particular, Applicants respectfully submit that Replacement sheets 1 and 4 clearly show a plurality of channels 62, 64 and a plurality of lift pins 52, 54. Figures 1, 4, and 5 are sectional views illustrating channels 62, 64 and lift pins 52, 54 so any additional channels and lift pin, e.g., channel 66 and lift pin 56, are not visible. A different view such as the top view of Fig. 2 clearly illustrates any additional channels and lift pins, e.g., channel 66 and lift pin 56. Applicants respectfully submit that the Examiner’s objection to the drawings has been overcome.

Table 1: Summary of Replacement Sheet Changes

<u>Sheet #</u>	<u>Figs.</u>	<u>Changes</u>
1	1, 2	Broken lines for channels 62 and 64 more clearly illustrated on Fig. 1. Broken lines for channel 62 added on Fig. 2.
4	5	Broken lines for channels 62 and 64 added.



APPENDIX A
APPLICATION NUMBER 10/816,289
REPLACEMENT SHEETS 1 AND 4